FILE 'REGISTRY' ENTERED AT 12:11:48 ON 27 OCT 2004
L17 7 S GFCRCICTRGFCRCICTR | GVCRCLCRRGVCRCLCRR/SQSP

FILE 'CAPLUS' ENTERED AT 12:12:58 ON 27 OCT 2004
L18 5 S L17

L18 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 26 Jan 2004
ACCESSION NUMBER: 2004:60123 CAPLUS
DOCUMENT NUMBER: 140:122752
TITLE: Antimicrobial theta defensins, analogs thereof, and methods of use
INVENTOR(S): Selsted, Michael E.; Tran, Dat Q.
PATENT ASSIGNEE(S): The Regents of the University of California, A California Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 46 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004014669	A1	20040122	US 2003-427715		20030430
PRIORITY APPLN. INFO.:			US 2002-377071P	P	20020430

OTHER SOURCE(S): MARPAT 140:122752
AB The invention provides theta defensin analogs having antimicrobial activity. The invention also provides a method of reducing or inhibiting growth or survival of a microorganism in an environment capable of sustaining the growth or survival of the microorganism, comprising administering an effective amount of a theta defensin analog to the environment, thereby reducing or inhibiting the growth or survival of the microorganism. The structure and microbicidal activities and relationships of theta defensins and protegrin-1 were evaluated by comparing the microbicidal activities of 20 analogs against Escherichia coli, Candida albicans, and Cryptococcus neoformans and by determining the relative bactericidal activities in assays containing ionic and serum additives.
IT **306966-04-1P 374088-87-6P 648858-22-4P**
648858-23-5P 648858-24-6P
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(antimicrobial theta defensins, analogs thereof, and uses)

L18 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 09 Aug 2002
ACCESSION NUMBER: 2002:594692 CAPLUS
DOCUMENT NUMBER: 137:153832
TITLE: Novel antiviral activities of primate theta defensins and mammalian cathelicidins
INVENTOR(S): Maury, Wendy; Stapleton, Jack; Stinski, Mark; Roller, Richard; McCray, Paul B.; Tack, Brian
PATENT ASSIGNEE(S): University of Iowa Research Foundation, USA
SOURCE: PCT Int. Appl., 65 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002060468	A2	20020808	WO 2002-US2435	20020129
WO 2002060468	A3	20030123		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003022829	A1	20030130	US 2002-60102	20020129
US 2004086535	A1	20040506	US 2003-721839	20031125
PRIORITY APPLN. INFO.:			US 2001-265270P	P 20010130
			US 2001-309368P	P 20010801
			US 2002-60102	A3 20020129

AB The present invention relates to the use of anti-viral peptides in the inhibition and treatment of viral infections, in particular infections caused by enveloped viruses. These anti-viral peptides, some natural and others artificial, adopt either amphiphilic alpha-helical or a theta structure where the homodimeric or heterodimer peptides are joined by both cysteine bonds and circularization of the peptides. These agents may be used alone or in combination with more traditional anti-viral pharmaceuticals.

IT **307334-75-4 307334-76-5**
RL: PRP (Properties)
(unclaimed sequence; novel antiviral activities of primate theta defensins and mammalian cathelicidins)

L18 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 07 Feb 2002
ACCESSION NUMBER: 2002:102701 CAPLUS
DOCUMENT NUMBER: 136:400525
TITLE: Homodimeric θ-defensins from Rhesus macaque leukocytes. Isolation, synthesis, antimicrobial activities, and bacterial binding properties of the cyclic peptides
AUTHOR(S): Tran, Dat; Tran, Patti A.; Tang, Yi-Quan; Yuan, Jun; Cole, Tim; Selsted, Michael E.
CORPORATE SOURCE: Departments of Pathology and Microbiology & Molecular Genetics, University of California, Irvine, CA, 92697, USA
SOURCE: Journal of Biological Chemistry (2002), 277(5), 3079-3084
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rhesus θ-defensin 1 (RTD-1) is a unique tridisulfide, cyclic antimicrobial peptide formed by the ligation of two 9-residue sequences derived from heterodimeric splicing of similar 76-amino acid, α-defensin-related precursors, termed RTD1a and RTD1b. The structures of RTD-2 and RTD-3 were predicted to exist if homodimeric splicing of the RTD1a and RTD1b occurs in vivo. Western blotting disclosed the presence of putative θ-defensins, distinct from RTD-1, in leukocyte exts. Two new θ-defensins, RTD-2 and RTD-3, were purified by reverse-phase high performance liquid chromatog. and characterized by amino acid anal., matrix-assisted laser desorption/ionization time-of-flight mass spectroscopy, and comparison to the synthetic stds. RTD-2 and RTD-3 are the predicted homodimeric splicing products of RTD1b and RTD1a, resp. The cellular abundance of RTD-1, -2, and -3 were 29:1:2, indicating that there is a preference for the heterodimeric ligation that generates RTD-1. RTD-1, -2, and -3 had similar antimicrobial activities against Staphylococcus aureus, Candida albicans, and Cryptococcus neoformans, whereas the activity of RTD-2 against Escherichia coli was 2-3-fold less than those of RTD-1 and RTD-3. Equal amts. of each θ-defensin bound to E. coli cells, indicating that the differences in antibacterial activities are the result of post-binding processes.
IT **306966-04-1P 374088-87-6P**
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(isolation, synthesis, and antimicrobial activities of homodimeric θ-defensins of Rhesus macaque)
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 20 Sep 2001
ACCESSION NUMBER: 2001:688259 CAPLUS
DOCUMENT NUMBER: 135:370575
TITLE: Circular minidefensins and posttranslational generation of molecular diversity
AUTHOR(S): Leonova, Larisa; Kokryakov, Vladimir N.; Aleshina, Galina; Hong, Teresa; Nguyen, Tung; Zhao, Chengquan; Waring, Alan J.; Lehrer, Robert I.
CORPORATE SOURCE: Department of Medicine, UCLA School of Medicine, Los Angeles, CA, USA
SOURCE: Journal of Leukocyte Biology (2001), 70(3), 461-464
CODEN: JLBIE7; ISSN: 0741-5400
PUBLISHER: Federation of American Societies for Experimental Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors purified two new minidefensins (RTD-2 and RTD-3) from the bone marrow of rhesus monkeys. Both were circular octadecapeptides that contained three intramol. disulfide bonds and were homologous to RTD-1, a circular (θ) defensin described previously. However, whereas the 18 residues of RTD-1 represent spliced nonapeptide fragments derived from two different demidefensin precursors, RTD-2 and -3 comprise tandem nonapeptide repeats derived from only one of the RTD-1 precursors. Thus,

circular minidefensins are products of a novel post-translational system that generates effector mol. diversity without commensurate genome expansion. A system wherein two demidefensin genes can produce three circular minidefensins might allow n such genes to produce (n/2)(n+1) peptides.

IT **306966-04-1**, θ-Defensin RTD 3 **374088-87-6**, θ-Defensin RTD 2
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(cloning and characterization of circular defensins of rhesus monkey)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 21 Nov 2000
ACCESSION NUMBER: 2000:814517 CAPLUS
DOCUMENT NUMBER: 133:366399
TITLE: Antimicrobial theta-defensins and methods of using same
INVENTOR(S): Selsted, Michael E.; Tang, Yi-quan; Yuan, Jun; Ouellette, Andre J.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000068265	A1	20001116	WO 2000-US12842	20000510
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6335318	B1	20020101	US 1999-309487	19990510
EP 1187850	A1	20020320	EP 2000-930577	20000510
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6514727	B1	20030204	US 2001-967808	20010926
US 2003162718	A1	20030828	US 2002-313994	20021205
PRIORITY APPLN. INFO.:			US 1999-309487	A2 19990510
			WO 2000-US12842	W 20000510
			US 2001-967808	A1 20010926

OTHER SOURCE(S): MARPAT 133:366399

AB The present invention relates to an isolated cyclic peptide, θ-defensin, having antimicrobial activity, and to θ-defensin analogs. A θ-defensin can have the amino acid sequence

Xaa1-Xaa2-Xaa3-Xaa4-Xaa5-Xaa1-Xaa6-Xaa4-Xaa4-Xaa1-Xaa1-Xaa6-Xaa4-Xaa5-Xaa1-Xaa3- aa7-Xaa8, wherein Xaa1 to Xaa8 are defined; wherein Xaa1 can be linked through a peptide bond to Xaa8; and wherein crosslinks can be formed between Xaa3 and Xaa3, between Xaa5 and Xaa5, and between Xaa7 and Xaa7. For example, the invention provides a θ-defensin having the amino acid sequence Gly-Phe-Cys-Arg-Cys-Leu-Cys-Arg-Arg-Gly-Val-Cys-Arg-Cys-Ile-Cys-Thr-Arg (SEQ ID NO:1), wherein the Gly at position 1 (Gly-1) is linked through a peptide bond to Arg-18, and wherein disulfide bonds are present between Cys-3 and Cys-16, between Cys-5 and Cys-14, and between Cys-7 and Cys-12. The invention also provides nucleic acids encoding θ-defensins and antibodies that specifically bind a θ-defensin. In addition, the invention relates to methods of using θ-defensin to reduce or inhibit microbial growth or survival.

IT **306966-04-1P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; antimicrobial theta-defensins and methods of using same)

IT **307334-75-4 307334-76-5**
RL: PRP (Properties)
(unclaimed sequence; antimicrobial theta-defensins and methods of using same)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

E20 THROUGH E26 ASSIGNED

FILE 'REGISTRY' ENTERED AT 12:13:42 ON 27 OCT 2004

L19 7 SEA FILE=REGISTRY ABB=ON PLU=ON (306966-04-1/BI OR 374088-87-6/BI OR 307334-75-4/BI OR 307334-76-5/BI OR 648858-22-4/BI OR 648858-23-5/BI OR 648858-24-6/BI)

L20 7 L17 AND L19

L20 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **648858-24-6** REGISTRY
CN L-Argininamide, glycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-L-arginylglycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-, cyclic (3→16),(5→14),(7→12)-tris(disulfide) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 7: PN: US20040014669 TABLE: 1 claimed protein
SQL 18

SEQ 1 GVCRCLCRRG VCRCLCRR
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HITS AT: 1-18

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:122752

L20 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **648858-23-5** REGISTRY
CN L-Arginine, glycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-L-arginylglycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-, cyclic (3→16),(5→14),(7→12)-tris(disulfide) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6: PN: US20040014669 TABLE: 1 claimed protein
SQL 18

SEQ 1 GVCRCLCRRG VCRCLCRR
========== ========
HITS AT: 1-18

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:122752

L20 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **648858-22-4** REGISTRY
CN L-Arginine, glycyl-L-phenylalanyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl-L-arginylglycyl-L-phenylalanyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl-, cyclic (3→16),(5→14),(7→12)-tris(disulfide) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5: PN: US20040014669 TABLE: 1 claimed protein
SQL 18

SEQ 1 GFCRCICTRG FCRCICTR
========== ========
HITS AT: 1-18

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 140:122752

L20 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **374088-87-6** REGISTRY
CN Cyclo(L-arginyl-L-arginylglycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-L-arginylglycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl), cyclic (5→18),(7→16),(9→14)-tris(disulfide) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN θ-Defensin RTD 2
CN 3: PN: US20040014669 TABLE: 1 claimed protein
SQL 18

SEQ 1 RRGVCRCLCR RGVCRCLC
========== ========
HITS AT: 1-11, 3-18

REFERENCE 1: 140:122752

REFERENCE 2: 136:400525

REFERENCE 3: 135:370575

L20 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **307334-76-5** REGISTRY
CN L-Arginine, glycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl-L-arginylglycyl-L-valyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-leucyl-L-cysteinyl-L-arginyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 12: PN: WO0068265 FIGURE: 16 unclaimed sequence
CN 29: PN: WO02060468 SEQID: 29 unclaimed sequence
SQL 18

SEQ 1 GVCRCLCRRG VCRCLCRR
========== ========
HITS AT: 1-18

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 137:153832

REFERENCE 2: 133:366399

L20 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **307334-75-4** REGISTRY
CN L-Arginine, glycyl-L-phenylalanyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl-L-arginylglycyl-L-phenylalanyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 11: PN: WO0068265 FIGURE: 16 unclaimed sequence
CN 28: PN: WO02060468 SEQID: 28 unclaimed sequence
SQL 18

SEQ 1 GFCRCICTRG FCRCICTR
========== ========
HITS AT: 1-18

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 137:153832

REFERENCE 2: 133:366399

L20 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **306966-04-1** REGISTRY
CN Cyclo(L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl-L-arginylglycyl-L-phenylalanyl-L-cysteinyl-L-arginyl-L-cysteinyl-L-isoleucyl-L-cysteinyl-L-threonyl-L-arginylglycyl-L-phenylalanyl-L-cysteinyl), cyclic (2→11),(4→9),(13→18)-tris(disulfide) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN θ-Defensin RTD 3
CN 2: PN: US20040014669 TABLE: 1 claimed protein
SQL 18

SEQ 1 RCICTRGFCR CICTRGFC
========== ========
HITS AT: 1-15, 7-18

REFERENCE 1: 140:122752

REFERENCE 2: 136:400525

REFERENCE 3: 135:370575

REFERENCE 4: 133:366399

(FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 12:15:10 ON 27 OCT 2004)
L22 0 S L17

FILE 'HOME' ENTERED AT 12:15:19 ON 27 OCT 2004